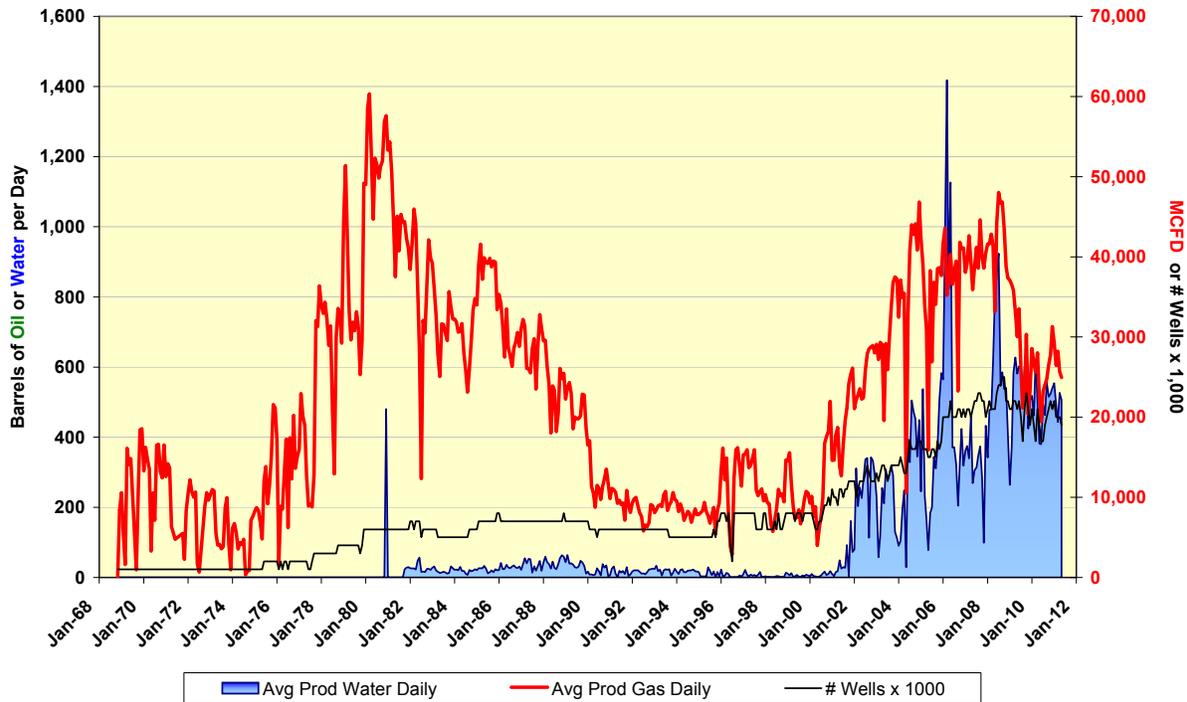


Kenai Field, Beluga / Upper Tyonek Gas Pool

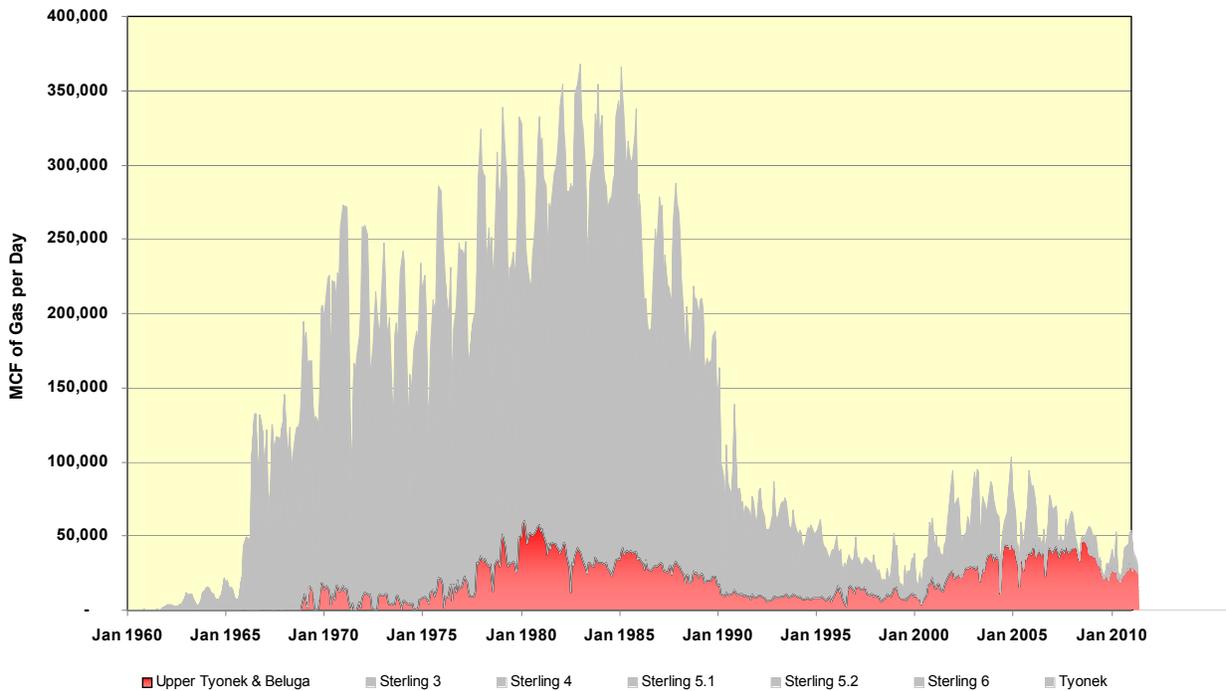
Summary

The Beluga / Upper Tyonek Gas Pool within the Kenai Gas Field is defined in Conservation Order No. 510 as the accumulation of gas common to and which correlates with the accumulation found in the interval 4587' to 9155' in the Kenai Deep Unit No. 1 well.¹ This pool was discovered on October 11, 1959 by the Kenai Deep Unit No. 1 well, and regular gas production began in November 1968 from well Kenai Deep Unit No. 2 (21-8). Production peaked at an average daily rate of 60,340,000 cubic feet per day in March 1980 from 6 production wells and then began to decline to a low of about 8,000,000 cubic feet per day for all of 1995. During 1995, the addition of two new wells increased pool production. Since 2000, 28 wells have been added, increasing production to 48,035,000 cubic feet per day in July 2008. Since then, production has declined to about 25,000,000 cubic feet per day in May 2011.²

Kenai Field, Beluga / Upper Tyonek Gas Pool Average Daily Production Rates



Kenai Field, Beluga / Upper Tyonek Gas Pool
Relative Contribution to Average Daily Production Rate for Entire Kenai Field



Geology

In the upper Beluga Formation, the Kenai Gas Field structure consists of an asymmetric anticline that trends north-south that lies about 5 miles south of the City of Kenai. The axis of this anticline is parallel with, and about 1 mile east of, the eastern coastline of the Cook Inlet. The eastern flank of the anticline dips toward the east with a slope of about 450 feet per mile, while the western flank dips westward at about 800 feet per mile. At the top of the pool, the crest of the anticline lies about 4,550' below sea level. At the 4,800-foot elevation contour (below sea level), the anticline measures about 3-1/2 miles long and 2 miles wide.³ The Kenai Gas Field anticline lies on trend with, but is fault-separated from and is shallower than, the Cannery Loop anticline that lies 5 miles to the north.^{4,5}

SFD
 July 21, 2011

¹ Alaska Oil and Gas Conservation Commission, 2004, Conservation Order No. 510: Pool Rules for Kenai Gas Field, Sterling Gas Pools 3, 4, 5.1, 5.2, 6; Beluga / Upper Tyonek Gas Pool; and Tyonek Gas Pool 1

² Alaska Oil and Gas Conservation Commission, 2011, Well and Production Database

³ Alaska Oil and Gas Conservation Commission, 2004, Conservation Order No. 510, cited above, Attachment 2, Upper Beluga Structure Map

⁴ Swenson, R., 2003, Introduction to Tertiary Tectonics and Sedimentation in the Cook Inlet Basin; in Dallegge, T.A., ed., 2003, 2001 Guide to the Petroleum, Geology, and Shallow Gas Potential of the Kenai Peninsula, Alaska, AK DGGs Misc. Pub. 128, p. 17

⁵ Brimberry, D.L., Gardner, P.S., McCullough, M.L., and Trudell, S.E., 2003, Kenai Field, the Kenai Peninsula's Largest Gas Field: in Swenson, R.F., ed. 2002 Geology & Hydrocarbon Systems of the Cook Inlet Basin, AK: Field Trip Guide Book, p. 20-25